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CONTENTS

AIR

Considerations in Determining an Airport's Size (N. Domrachev; VOZDUSHNYY TRANSPORT, 15 Mar 80)	1
'Start' System Installed at Sochi Airport (V. Demin; VOZDUSHNYY TRANSPORT, 8 Apr 80)	4
'Svecha-3' System of Landing Lights (V. Nikolayev; KRASNAYA ZVEZDA, 5 Feb 80)	5
Antarctic Flight of IL-86D (A. Gorokhov; VOZDUSHNYY TRANSPORT, 26 Feb 80)	7
Briefs Tupolev 144 Updated	9

MOTOR VEHICLE

Briefs New Soviet Truck	10
----------------------------------	----

RAILROAD

Greater Mechanization Needed in Baltic Railroad System (P. Bordakhov; SOVETSKAYA LATVIYA, 12 Mar 80)	11
Progress on Second Line of Transcaucasian Railroad (Sh. Amashukeli; KOMUNISTI, 5 Feb 80)	14
Lags in Turnaround Time for Construction Industry Cars (A. Senokosov; STROITEL'NAYA GAZETA, 26 Mar 80)	17

CONTENTS (Continued)

Briefs

Berezovyy-Komsomolsk Railway Line	19
'Magnetic Cushion' Train Tested	19
Central BAM Construction	19
BAM Tunnel Construction	20
Bridge Construction	20
Railroad Robot	20
BAM Bridges	20

OCEAN AND RIVER

Briefs

Container Vessels Ordered	21
Ro-Ro Ships	21
Anadyr Port	21
Polish Trawler Delivery	21
Daltekhflot Administration	22
Ship for Oil Spills	22
Vanino-Kholmsk Ferry Crossing	22

MISCELLANEOUS

Vladivostok Transport Junction in Operation Over a Year (N. Tsakh; KHOZYAYSTVO I PRAVO, No 11, 1979)	23
Tunnel To Connect Leningrad Islands (M. Chuprov; SOTSIALISTICHESKAYA INDUSTRIYA, 11 Dec 79)	30
Transshipment Problems at Ostrovskiy Port (S. Grigor'ev; VODNYY TRANSPORT, 8 Mar 80)	32
Air Cushion Land Vehicle Described (SOTSIALISTICHESKAYA INDUSTRIYA, 31 Jan 80)	34

AIR

CONSIDERATIONS IN DETERMINING AN AIRPORT'S SIZE

Moscow VOZDUSHENYI TRANSPORT in Russian 15 Mar 80 p 2

[Article by N. Domrachev, assistant professor, Kiev Institute of Civil Aviation Engineers: "The Dimensions Needed for an Airport"]

[Text] More and more new airports continue to be put into operation in our country. The beginning of an airport is always noteworthy. But an entire complex of the most diverse factors, including economic ones, must be taken into account to construct an airport. The party is continually focusing each one of us toward the achievement of maximum results with minimum expenditures. This is stressed again in the CPSU Central Committee and USSR Council of Ministers decree "On improving the planning and reinforcing the influence of the economic mechanism on improving production efficiency and work quality."

It is right to ask: is it always advisable to build an airport in every city, even a relatively large one? How large should it be? Such questions are touched upon in the article below.

Now and then a city nearly comes right up to an airport, and the airport cannot operate normally. Such a situation has taken shape in Krasnoyarsk and Minsk, for example. The situation is similar at Kiev's Zhulyany Airport. There are two alternatives to solve the problem. The airport can be moved to another place sufficiently distant from Kiev. Or instead of this, Zhulyany can be "merged," so to speak, with Borispol' by transferring all flights to it.

Which way to go? This question is not incidental. Giving one answer or another to it means adopting the viewpoint of the supporters of one of the two alternatives.

The first alternative is construction of local, small-volume airports intended principally to serve one city. The airports of Kherson and Nikolayev, and Lutsk and Rovno, located within 40 kilometers of each other, are dramatic examples of this.

The majority of our country's airports at one time were built and are now operating in full conformity with this trend. In due course this trend received acceptance and was confirmed in recommendations of the Central Scientific Research Design Institute of Town Planning. In conformity with these recommendations, construction of a second airport should be envisaged for a city which reaches a population of 800,000 to 1 million.

The second alternative is construction of large, so-called regional airports, serving a group of closely located cities, or construction and development of existing airports to the size dictated by the increased rate of departures (Domodedovo, Vnukovo, Pulkovo and others).

I am one of the supporters of large airports.

To a greater extent, a large airport is conducive to introduction of the achievements of scientific and technical progress in our country's air transport. To begin with, it establishes the conditions for utilization of highly productive types of aircraft with large passenger and cargo capacity such as, for example, the Il-62, Tu-154 and Il-86.

Analysis of the relationship of the proportionate capital investment and operational and adduced expenditures, as well as the level of labor productivity, has demonstrated the following. With an increase in an airport's traffic volume these indicators improve sharply. Thus, as an example, by increasing the airport's traffic volume from 5 to 10 million passengers annually, proportionate capital investment is reduced by approximately one-half, operational expenses will be reduced to three-quarters as much, and adduced expenses will be decreased to approximately two-thirds as much. ~~The level of labor productivity is not~~ doubled in this case.

A large airport provides the opportunity to resolve a problem such as this, too. It is well known that the time an air passenger spends before and after flights--particularly on short- and medium-distance flights--is comparable with the time spent in flight, and sometimes even exceeds it at present.

At this time, passengers are transported between the city and the airport principally in buses. This is not so convenient. In fact, airports have "gone away" a considerable distance from the city, and traffic density on city streets and roads has increased sharply. All this has led to a significant increase in travel time.

One of the important potentials for putting the "airport-city" transportation link in order in the first stage, aside from construction of modern highways, will be the use of existing railway lines, with construction of special access lines directly to the air terminal area. This is entirely practicable. In fact, most of our country's largest cities (Moscow, Khar'kov, Kiev, Sverdlovsk, Novosibirsk, Kuybyshev and others) have a developed network of electrified rail lines close to an airport. In the near future we can expect the appearance of new forms of transport such as trains on an air or magnetic cushion. Introduction of these forms of transport will practically resolve the problem of rapid transit between cities and airports. As domestic and foreign experience has shown, introduction of these rapid means of transport is expedient for the heavy passenger flows which only the largest airports can accommodate.

Large airports have one more unquestionable advantage. They are more advantageous from the viewpoint of resolving the problem of environmental protection. As an example, construction of one airport with traffic volume of 10 million passengers annually instead of 2 to 5 million reduces the requirement for siting territory to approximately five-ninths as much, the area affected by noise is reduced by half, and the drainage area is significantly simplified and reduced in cost.

We could not dwell on the advantages of large airports in such detail if this trend were universally supported. In practice, the advantages that have been described are frequently disregarded.

Thorough research of the process of concentrating air transport and receiving recommendations on this basis for optimum airport size in accordance with specific conditions is one of the basic problems of modern airport construction. The completeness and comfort of service in the air transportation of our country's people and meeting the national economy's requirements for transport depend to a large extent on the successful solution of this problem.

8936
CSO: 1829

AIR

'START' SYSTEM INSTALLED AT SOCHI AIRPORT

Moscow VOZDUSHNYY TRANSPORT in Russian 8 Apr 80 p 3

[Report by V. Demin, senior engineer, Sochi Airport]

[Text] The "Start" automated air traffic control system has been put into operation at Sochi Airport.

A meeting of aviation workers was held at the airport in honor of this important event. The great concern of the party and the government for the development of civil aviation was mentioned, and warm appreciation was extended to those who developed it, the repairmen from the plant which manufactured it, and to the engineering and technical personnel of the ERTOS [Main Administration for Operation of Radio-Technical Equipment and Communications in Civil Aviation of the USSR Ministry of Civil Aviation] base and to traffic controller personnel of the airport who have taken an active part in work to put the system in operation on schedule.

V. Kharkhota, production pacemaker and senior controller, was charged with cutting the ribbon, symbolically opening the door to control with the new equipment. The shift headed by B. Khaltamov, who had passed qualifying examinations with an "excellent," took the first watch in controlling air traffic with the automated system.

8936
CSO: 1829

AIR

'SVECHA-3' SYSTEM OF LANDING LIGHTS

Moscow KRASNAYA ZVEZDA in Russian 5 Feb 80 p 4

[Article by V. Nikolayev: "'Svecha-3' Safeguards the Landing"]

[Text] Since the first days of the emergence of aviation, its development has been linked with the continuing and intensive struggle for independence from the capriciousness and whims of bad weather. Thanks to the progress of electronics, efficient equipment has been developed which makes it possible to detect weather "surprises" and correct the course in accordance with conditions on the route. At the same time, an indifferent statistic attests that 72 percent of all emergencies and accidents in civil aviation take place during landing in bad weather.

[Under the standards of the International Civil Aviation Organization, of which the USSR is an active member, weather conditions are divided into three categories. They are determined by the criteria of lateral and vertical visibility. Thus, under Category I minimums lateral visibility is 800 meters and vertical visibility is 60 meters; under Category II minimums the visibility is 400 and 30 meters, respectively. The three levels of Category III minimums cover lateral visibility from 200 meters to zero when there is practically no vertical visibility. And although today Aeroflot airliners have been equipped with automatic landing systems for use under one category or another, a reliable landing is made in accordance with visible checkpoints on the ground all the same. For an aircrew, such reference points are the airfield lights, which they "read" to execute the maneuvers necessary to complete the flight. This is why improvement in the technology of lighting airports and runways still remains a long-range task which is being resolved by the specialists of different countries./ [In boldface]

The establishment in our country of the "Svecha-3" complex of light signals and electrical equipment, which makes it possible to efficiently resolve problems connected with the operation of landing an aircraft in bad weather, is a new step in this direction. After "taking" an aircraft with landing radio aids which direct it to a specified altitude, "Svecha-3" provides the crew with the necessary data: the exact direction aligned

with the runway, the distance to the threshold, the point of touchdown, and the point for stopping the aircraft.

All the lights in the system are clearly visible to the crew. The color of the lights plays a more important role than previously. The graphic color marking of the runway makes it possible for the crew to orient itself more easily, and reports additional specific data, such as how many meters are left before the end of the runway, or which taxi strip is to be taken to the parking area. One person operates "Svecha-3." He can turn the needed groups of lights on and off and change their intensity in accordance with weather conditions or at the pilot's request.

Tests of the light signal system have demonstrated its reliability and effectiveness. At present, "Svecha-3" is operating successfully in Donetsk, where it was first set up and approved, as well as in Riga and Vil'nyus, where it provides for landing under Category I minimums. "Svecha-3" has been set up for Category II minimums at one of the country's "hot" airports--Mineral'nyye Vody. The annual economic gains from introduction of the system at just three airports--Donetsk, Mineral'nyye Vody and Ul'yanovsk--amount to over 5 million rubles. Similar systems now are being installed at airports in Arkhangel'sk, Ashkhabad, Alma-Ata, Kemerovo, and other cities in the country.

But scientists and specialists already are working on extending the capabilities of the system. In the illumination engineering division of the Traffic Control Automation Research Center, tactical characteristics and specification requirements for the new "Svecha-4" light signal system already have been worked out and turned over to designers. It will safeguard landing under Category III minimums.

8936
CSO: 1829

AIR

ANTARCTIC FLIGHT OF IL-86D

Moscow VOZDUSHNYY TRANSPORT in Russian 26 Feb 80 p 1

[Report by special correspondent A. Gorokhov: "The Ultra-Long-Range Flight of the IL-86D Has Been Completed"]

[Text] Moscow-Molodetskaya (Antarctic)-Moscow. The flight, which took 78 hours and 54 minutes, covered 45,660 kilometers. Flights were made to the area of the geographic South Pole, the Pole of Inaccessibility, and Novolazarevskaya Station.

The red-winged IL-86D with the side number 74267 landed at Moscow's Vnukovo Airport on a holiday Saturday morning. The production-model passenger aircraft had completed an ultra-long-range flight to Antarctica.

Participants in the flight were met by workers of the Ministry of Civil Aviation, the USSR Goskomgidromet [State Committee for Hydrometeorology and Environmental Control] and the OKB imeni S. Il'yushina [Ilyushin Aircraft Design Bureau], relatives, friends and colleagues of the Antarctic travelers.

Leaders of the flight assessed the work accomplished in this way.

B. Grubiy, deputy minister of civil aviation, said it can be stated positively that an air bridge has been erected between Moscow and the Antarctic, and that the crews demonstrated high professional skill.

Ye. Tolstikov, deputy chairman of the USSR Goskomgidromet, said that the mission assigned to the air expedition had been carried out, and that the opening of the short African route provides new opportunities for scientific development of the sixth continent.

Now the flight has been completed. Meticulous analysis of all its details lies ahead. Aviators, scientists and designers will be taking part in this analysis. Today, in congratulating all the participants in this

long flight and all those who equipped and prepared for it on Soviet aviation's great achievement, some preliminary results can be summed up.

Perhaps the main thing that should be noted is that the technical feasibility of establishing a snow-and-ice airfield in the Antarctic which is able to accommodate heavy wheeled aircraft has been proved.

Let us add that Lenaeroprojekt specialists have been working on this problem for nearly 8 years. This is of even greater importance because utilization of more spacious and faster aircraft—such as the Il-76, for example—in the future is being envisaged for flights to the sixth continent.

Another no less important result is that the opportunity has emerged to provide an operational transport link of Soviet Antarctic stations with the Motherland. This concerns delivery of priority cargo and changing the winter shifts.

Of course, it would be incorrect to consider the flight an easy trip. Let us say that equipping a production-model aircraft with navigation instruments not provided for in the personnel arrangement for the on-board systems presented the crews with additional problems, because some of these systems did not function as we would have liked. As is well known, on one of the days during the stay in Antarctica, the Il-86D flew to the region of Novolazarevskaya Station. A trial landing on the ice airfield near this station was canceled. The point is that on the eve of the Ilyushin's arrival the runway had been covered with a considerable layer of snow. Despite all their resourcefulness, workers of the construction detachment failed to roll the strip to the firmness required.

In a word, there is much work ahead. Its objective is to make flights from the Soviet Union to the Antarctic a regular procedure. Participants in the flight, after completing a trip from winter to summer and back, warmly thank all those who, with their selfless labor, have helped them to carry out the important mission.

8936

CSO: 1829

AIR

BRIEFS

TUPOLEV 144 UPDATED--The USSR is said to be proceeding with the testing of a military version of the Tupolev 144, the old rival of the [French] Concorde. The aircraft in question would be a long-range bomber capable of flying at Mach 2.5 and carrying more weapons than any other similar aircraft. [Text] [Paris LE POINT in French 21 Jan 80 p 24]

CBO: 3100

MOTOR VEHICLE

BRIEFS

NEW SOVIET TRUCK--A new Soviet truck of the Utal [sic] 43202 type has recently gone into production. It is designed to operate under conditions of extraordinarily inhospitable terrain and has a load capacity of seven (7) tons.

[Text] [Donn DIE WIRTSCHAFT DES OSTBLOCKS in German 7 Mar 80 p 5]

CSO: 1826

RAILROAD

GREATER MECHANIZATION NEEDED IN BALTIC RAILROAD SYSTEM

Riga SOVETSKAYA LATVIYA in Russian 12 Mar 60 p 2

[Article by P. Boriakhov, chief engineer for freight services of the Baltic Railroad: "A Stake on Mechanization"]

[Text] Even if the locomotive engineer stepped up the speed while running the train along the main line, this would still not be enough to deliver the freight to the consignees on time. It is still necessary to know how to unload railroad cars rapidly and with quality as well. But it is possible to achieve this by virtue of continuous development and improvement of freight services, which today they rightly consider to be one of the most difficult sectors on the railroad.

The workers of the Riga Mechanized Division for Loading and Unloading Operations have done much during the 10th Five-Year Plan to speed up the processing of consists. With their own forces they have carried out the modernization of currently available and the construction of new open mechanized warehouses, charging stations and garage-workshops for the servicing of materials handling equipment.

The initiative and goal-directed work of the collective of the Riga Mechanized Division are yielding tangible results. During the past year the extent of full mechanization amounted to 95.1 percent here, which is substantially higher than the average level for the Baltic RR as a whole. This is helping the collective successfully to fulfill production quotas and to earn top-rank spots in socialist competition among kindred organizations of the railroad.

Quite a bit has been done to shift as much of heavy freight operations as possible to the shoulders of machines, as in other transport junctions of the republic. Thus, elevated tracks have been put into operation at four major yards, which has substantially accelerated the processing of gondola cars and flatcars carrying cargoes that are loose and shipped in bulk without packaging.

The freight yards of all the main stations in the republic have been outfitted with new highly efficient machines and equipment. As a result, the level of full mechanization of loading and unloading operations on Latvia's main steel

highways has reached 91.5 percent, which is 0.6 percent higher than planned for our railroad for the end of the five-year plan. During the past four years the volume of manual labor in the freight yards at stations has been reduced by more than a third.

It would seem that the successes have been considerable. But there are still instances that are not that infrequent where railroad cars stand for long periods of time at stations on dead-end tracks and sometimes await unloading or loading for days. The question of the need to eliminate these shortcomings by the earliest possible date was once again pointedly and rightly raised at the November (1979) Plenum of the CPSU Central Committee.

What kinds of ways do we see to solve these problems? These are, it goes without saying, the further strengthening and replenishment of the stock of equipment. And this means not so much by virtue of quantity as by virtue of an improvement in the qualitative structure of equipment and machines. For instance, we are introducing new automated clamps for the processing of medium-tonnage containers. Each such device significantly eases the labor of people. In those places where four slingers were previously employed, one slinger can now manage the job with its help. We are setting up gantry cranes equipped with hatch hoists [lyukopod'yanniki] at stations at which consists carrying loose cargoes and shipments of cargoes in bulk without packaging are arriving. This improves [working] conditions and raises labor productivity sharply during unloading.

We shall continue the incorporation of progressive processing methods for railway shipments. In particular, we are planning to increase the delivery of freight in packets as well as in strengthened packaging materials.

Railway workers are faced with great work in improving the interaction with workers in related sectors, namely, the employees of maritime and motor vehicle transport. In this we are guided by the advanced practices of the collectives of the Leningrad Transport Junction, which are now being incorporated on the Baltic RR as well. In our view, there could be quite a bit of benefit derived in strengthening contacts with workers in related sectors from the inclusion of motor vehicle operators as well in the over-all brigades in the divisions of loading and unloading operations. However, to do this it is necessary to evaluate the work of each partner not in terms of departmental indicators, as is done now, but in terms of the end results of their joint labor.

It is necessary to do much in terms of the development of a whole series of railway yards in order to speed up the forward movement of freight along the main line. And here, I think, we are experiencing the most difficulties. This applies, for instance, to the Riga-Prechu-2 Station. The first section of the mechanized freight yard here is to be put into operation during the current year. But the builders from Construction Administration No 311 of the Balttransstroy [Baltic Transportation Construction] Trust, who have, as they say, already let all the deadlines slip by and are now scarcely able to cope with their task, are letting us down.

Owing to the cramped conditions of the territory, we are not able to utilize fully the machines and equipment at the Cēsis and Daugavpils stations. The question of the removal of rail freight services to a site outside the boundaries of these cities was raised long ago, but a delay has occurred in the allocation of the necessary plots of land.

But, as we know, there is no equipment whatsoever that will help if the collectives themselves do not display more initiative and operations-efficiency in their work. There are still quite a few unutilized reserves here in the hands of the workers of the rail freight services of the republic.

The employees of this and other freight services must continually keep in mind that they are laboring in a sector on which the speed and regularity of the forward movement along the main line of freight that is of importance to the national economy directly depends. During the current year we are faced on our railroad with increasing the volume of freight handling by 3 percent. It is necessary to exert the maximum of effort at each station so that all the railroad cars which arrive are unloaded rapidly, with quality and with the use of high-efficiency technical means.

8663

CUO: 1829

RAILROAD

PROGRESS ON SECOND LINE OF TRANSCAUCASIAN RAILROAD

Tbilisi KOMUNISTI in Georgian 5 Feb 80 p 3

[Article by Sh. Amashukeli: "Fighting Cliffs and Gullies. How the Second Line of the Transcaucasian RR is Being Laid"]

[Text] Another vast project is underway in Georgia. A second line of the Transcaucasian Railroad is being built in our republic. Along with this, the present line is also undergoing rapid general reconstruction. This means that new stations are being built, platforms are being enlarged, centralized electrical switching is being installed, contact systems are being erected, viaducts and tunnels are being built, power substations are being constructed, railroaders are getting new housing, and so on.

Yes, the project is magnificent. In terms of complexity and importance, the work involved in the building of the second line can be compared only with the IngurGES project. It is no simple matter, considering our terrain--especially in the westwardly direction--to wrest land from sheer cliffs and lay down tracks. It is difficult but essential, for nowadays there is simply no other solution. The deluge of incoming and outgoing freight has to be handled. Consider all the products made in Georgia that are being awaited all over--ferroalloys, machine tools, steel and iron, cranes and electric locomotives, wine-making machinery and instruments, cotton and knit goods, citrus fruit and tea--too many to count. The present line's capacity can accommodate scarcely half of today's demands on it.

At the November 1979 CPSU CC Plenum, L. I. Brezhnev spoke of our country's economic matters and focused attention on the operation of rail transport, where the situation is serious. He mentioned that the CPSU CC and Council of Ministers passed a special decree in January 1977 concerning measures to develop rail transport. But neither the Ministry of Railways nor Gosplan have succeeded in implementing it properly. As a result, vital freight transport plans are being seriously disrupted.

As we can see, this criticism relates to freight haulage plan implementation. We may state without exaggeration that it is this factor which now largely determines the further development of our national economy. This accounts for the great importance which attaches to the task of boosting rail capacity and hence the construction of this second line.

The construction project is in the experienced hands of Kavkaztransstroy Trust. Start with the fact that the railroad's overall length today is 179.9 kilometers. This is pretty long.

Trust manager A. Saganelidze has this to say: "Let no one think that we started the project from one point and are building right down the line. In fact, we are working on various segments, owing, as I have said, to the peculiarities of the terrain. We're working on those stretches for which we have plans in hand."

And speaking of difficulty, we might add that in this regard the Surami Pass (Pereval) is unequalled on any other section of Soviet railways. Every meter of the new 34-kilometer second line built there was gained at the cost of unprecedented struggle with the elements. It is no longer necessary to build several big and little bridges, tunnels, and who knows what else every hundred meters. One 3.2-kilometer segment on the Tsipa-Moliti run alone took four years to build. A landslide 1,500 to 2,000 meters high would destroy even the most carefully constructed embankment and consign it to hell. This stretch would be equivalent to 300 kilometers on the Russian steppes.

Extraordinary staunchness, willpower, dedication, and outright heroism were exhibited by the people working on Surami Pass, especially the collectives of Head Repair-Restoration Train No 24 and Bridge Construction Team No 39, led respectively by Dzh. Natelashvili and B. Chigvaria. Mention should also be made of the priceless contribution made to the overall project by the collectives of Construction-Installation Trains Nos 349, 815, 243, and 332. Train chiefs I. Tsetsadze, I. Korolkov, Sh. Malaguradze, and V. Bokhochadze have earned reputations as outstanding specialists.

Now intensive work is underway on various sections of the second line construction. The stretch between Dzegvi and Mtskheta, for example, is scheduled for completion toward the end of the year. But the builders have decided to deliver it ready for operation in the second quarter. Incidentally, when this segment goes into operation the second line between Azerbaijan's Beyugkyasik Station and Dzegvi will be complete, a distance of over 100 kilometers.

The second line is already built on many segments between Dzegvi and Khashuri, but much work remains to be completed on the Metekhi-Grakali, Agara-Kareli, and Agara-Gomi runs. As for the Dzegvi-Ksani and Kavtiskhevi-Kaspi sections, 10 kilometers of track remain to be laid,

and the railroaders themselves are doing it. It should also be mentioned that the railroaders have laid 17 kilometers of track with their own forces, using funds allocated for capital repairs, and intend to continue work in that direction. Only 32 kilometers remain to complete construction of the second line from Beyugkyasik to Marelist.

Nineteen kilometers remain to be done to connect the second line between Marelist and Zestafoni. Specialists claim that this is an incredibly difficult section, and the project plans haven't even been approved yet.

But this does not mean that the project is finished out in West Georgia. In fact, the work front is broader now than ever. Construction is under way on 10-kilometer stretches between Sviri and Adzhameti and between Kopitnari and Mukhlani. The former is supposed to be operational next year according to the plan, but the builders intend to finish it this year. They're also planning to turn the second stretch over to the client ahead of schedule. Work will also begin this year on laying the track for a seven-kilometer section between Zestafoni and Argveti. Although construction on this run is not very difficult, a large amount of work will have to be carried out to expand the Zestafoni Station's track operations. This growing industrial city has to have a big, large-capacity, completely-outfitted station.

The final point of the second-line project is Veselaya Station. This will take quite a while. The fact is that in terms of the terrain and the complexity of the work, the Sukhumi-Afoni and Gagra-Veselaya sections are just as tough as Surami Pass. The builders will have to build lots of tunnels and bridges there. The Samtredia-Sukhumi segment will be somewhat easier, which should alleviate the situation.

A. Saganelidze thinks that the construction timetables for the second line could have been shortened considerably if the project did not run parallel to the present line. To carry out blasting and certain other difficult construction operations, a few "sacrifices" are needed. They include halting train traffic from time to time. It is a very difficult matter to disrupt traffic even for one minute on a track carrying a steady stream of trains. And what can you do in a few minutes--hours are hardly enough. Naturally, all of this doesn't come cheap, but there is no other way.

And so this vital project has entered a new phase. It won't be long before the second line is completed and ready to serve the people. Congratulations to all those who are bringing that day closer.

6854
CSO: 1810

RAILROAD

LAGS IN TURNAROUND TIME FOR CONSTRUCTION INDUSTRY CARS

Moscow STROITEL'NAYA GAZETA in Russian 26 Mar 80 p 3

[Article by A. Senokosov: "The Wheels are Not Turning"]

[Text] Let us present the data on idle time for cars on enterprise and organization sidings in 1979 at the start of this survey on the use of rail transport in the union construction ministries:

	Idle time (hours)		Fine, thousands of rubles	Losses, thousands of cars
	Norm	Actual		
Ministry of Construction Materials Industry	5.4	6.6	9642	56
Ministry of Power and Electrification	4.9	5.9	7776	34
Ministry of Industrial Construction	5.8	7.2	3368	13.6
Ministry of Construction	4.7	7.7	3611	14.7
Ministry of Petroleum and Natural Gas Construction	4.7	12.5	2067	8
Ministry of Heavy Industry Enterprise Construction	6.8	8.2	3487	15

As we see, this race of losses, where hours of idle time attest to tens of thousands of cars being taken from circulation and millions in fines, has its own leaders. If the Ministry of the Construction Industry is ahead of everyone else in the "total costs" column (56,000 cars and more than R 9.5 million in fines), the Ministry of Petroleum and Natural Gas Construction, the ministry with the least volume of railroad cargo being processed, holds another record--almost 8 hours of idle time beyond the norm. And overall the picture is thus: Not one of the subsectors can be called a model in regard to the efficient use of the railroad car inventory.

The Kurganskoye association "Selkhozkonstruktsiya" (director P. Korabel'-shchikov) delayed more than 4,000 cars above the norm, about 60 percent of the number delivered to it, for freight operations in 1978 and the first seven months of 1979. Hundreds of cars remain unloaded every day at construction industry enterprises in Rostovskaya Oblast for just this reason. More than 5 million tons of national-economy freight were not transported here last year, and how much will not be transported from the railroad stations?! Here are the results of a single inspection: Ministry of Power and Electrification--18,300 tons; Ministry of Construction--10,700; USSR Ministry of Transport Construction--27,200 tons.

It also happens the other way--empty cars stand idle. For example, the Ust'-Kamenogorskiy cement plant works irregularly. Moreover, when there is no production being unloaded, the administration (director A. Kosoy) does not take steps to reduce the empty cars being supplied to him, cars which pile up at the Bukhtarma station. By the way, when cargo which is frozen is unloaded, it is loosened not with drilling or with vibrating loosening machines (they are broken) but with a hammer with a wedge-shaped head, which results in damage to the cars. These are not single instances: for 11 months of last year, cars damaged because of this and other causes were submitted to the railroads as follows: Ministry of the Construction Materials Industry--1182 out of 1874; Ministry of Power and Electrification--772 out of 2115; Ministry of Construction--483 out of 550; and Ministry of Industrial Construction--285 out of 430.

Checks in Stavropolskiy Kray and Poltavskaya, Khar'kovskaya, Lipetskaya, Omskaya and other oblasts showed the same reasons for poor use of rolling stock. Enterprise and organization directors do not worry about transport and warehouse services or about establishing the necessary unloading depots. The low level of organization and mechanization of loading and unloading and the fact that railroad shops are short-handed in loading personnel bothers them little.

The People's Control Units have brought directors of a number of enterprises and organizations to responsibility. The staffs of the subsectors should have their say. First of all, their decisive reaction to this fact is required: measures had been planned earlier to eliminate the shortcomings at a majority of the enterprises, but they have remained on paper.

Wheels are supposed to turn. Such is their direct function. Cars are remaining immobile too long on sidings and this costs the state dearly.

9194

CSO: 1829

RAILROAD

BRIEFS

BEREZOVYY-KOMMOMOLSK RAILWAY LINE--The Berezovyy-Kommomolsk railway line is this year's priority project on the eastern section of the Baykal-Amur railway. Railway troops and collectives of sponsoring organizations must complete 31 million rubles' worth of construction and installation work. It will be necessary to complete reconstruction of the railway bed; construct new bridges and overbridges; commission railway stations, settlements and engineering structures at the Berezovka, Gorin, Evoron, Khurmuli and Kommomolsk stations; construct electric power transmission lines and communication lines, and construct motor roads along the railway route. A meeting of participants in construction of the priority project was held in Kommomolsk-na-Amure yesterday. The meeting uncovered shortcomings hampering the rate of construction and defined concrete measures for efficient organization of production and its material and technical supply. Meeting participants devoted special attention to timely and complete supply of materials, structures and equipment and to developing socialist competition for successful fulfillment of the tasks. Khabarovsk Kraykom secretary Lev Konstantinovich Obushenkov attended the meeting. [Khabarovsk Domestic Service in Russian 0930 GMT 21 Mar 80]

'MAGNETIC CUSHION' TRAIN TESTED--Soviet tests on a "magnetic cushion" train which can reach a speed of 500 km/hr have begun near Novocherkassk on a specially prepared experimental route. The model of this train, suspended over a concrete bridge, had been prepared within a year's time by the central Soviet research institute TRANSPROGRESS for future operation in the Kazakh capital Alma-Ata. The first tests on one of the first experimental routes will take place there presumably in 1982. The magnetic train is supposed to travel over 14 kilometers through the city of Alma-Ata. During the ensuing 1980's suburban dwellers from Alma-Ata will be incorporated into the magnetic train network, which will have a capacity of 25,000 passengers per hour. The experiments carried out at Novocherkassk have proved that the most favorable average velocity lies in the 200-250 km/hr range. [Text] [Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 2 Feb 80 p 5]

CENTRAL BAM CONSTRUCTION--Builders on the central section of the BAM railway are laying railroad tracks at the 1,528th kilometer. The track has been lengthened by 13 kilometers since the beginning of March and the first working train, according to plans, will arrive at Chilchi station by Lenin's birth anniversary. Track layers are now only 15 kilometers from Chilchi station. [Blagoveshchensk Domestic Service in Russian 1000 GMT 26 Mar 80]

BAM TUNNEL CONSTRUCTION--Four promontory tunnels [mysovyy tunnel] are being built on the northern shore of Lake Baykal where the Baykal-Amur railway will soon run. Our correspondent reports that before construction started, the planners were divided in their opinions. Some thought that the line could be built without tunnels by making cuttings in the cliffs and having the track run on the outside; this, however, would entail removing several million tons of earth and inevitable pollution of Lake Baykal. Further considerations which swung opinion to the idea of tunnels were the cost of maintaining slopes and building buttresses to counter subsidence, and the danger of rocks falling on to the trains. Reporting from the eastern portal of the first promontory tunnel, which is just 380 meters long, our correspondent interviews Yuriy Vladimirovich Starshin [phonetic], who says that the tunnel driving is taking place under difficult geological conditions in littoral cliffs which are badly wind- and water-eroded. Unlike the Nagornyy, Baykalskiy and Severomuryskiy tunnels, which are single-track, these tunnels are being built as double-track ones to start with. This is the first time this has happened on BAM. Tunnel-drivers have pledged to complete driving the tunnel by 7 November. [Moscow Domestic Radio Service in Russian 2300 GMT 24 Feb 80]

BRIDGE CONSTRUCTION--Bridge construction team No 26 of bridge construction trust No 8 will be assembling span structures of the motor road section of the Amur River bridge and constructing bridge supports across the Duki River to mark Lenin's birth anniversary. [Khabarovsk Domestic Service in Russian 0900 GMT 11 Mar 80]

RAILROAD ROBOT--In the Soviet Union a robot called FMG-10 has been developed for servicing railroad tracks and has already found practical application in the Moscow region. The threaded bolts which join the rails with the ties are loosened, oiled and once again tightened by the robots. This activity is carried out simultaneously on four bolts at a time. In 1 hour this "automatic monkey wrench", which rolls along the tracks, replaces a week's work by a "repair brigade" consisting of 20 men. [Text] [Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 29 Feb 80 p 6]

BAM BRIDGES--Workers of the Tyndatranstroy Trust have completed drilling work and installation of 15-meter posts for two supports of the bridge over the Chilchi River on the Tynda-Chara route. There will be five supports for this bridge and installation work is proceeding on two of them. [Blagoveshchensk Domestic Service in Russian 1000 GMT 8 Apr 80] A brigade of the Mostostroy-10 Trust completed construction of supports for a railway bridge over the Verkhnyaya Seledzha River 7 days ahead of schedule. [Blagoveshchensk Domestic Service in Russian 1000 GMT 14 Apr 80]

CSO: 1829

OCEAN AND RIVER

BRIEFS

CONTAINER VESSELS ORDERED--The Moscow Central Office of Mashinimport has ordered five additional container vessels for the Soviet Far East port of Vostochnyy, on Wrangel Bay, from the Japanese firm of Mitsui Co Ltd, with delivery slated for this year. Each of these two-story high vessels can accommodate and transport up to 30 tons. Since 1974 the Soviet Union has taken delivery of 25 of these container vessels. [Text] [Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 9 Feb 80 p 8]

RO-RO SHIPS--The Moscow Central Office of Sudimport has contracted in Poland for two more universal ships of 17,500 dwt for ro-ro traffic, which are to be delivered in 1982. The Lenin Shipyard in Gdansk is the manufacturer. Since 1976 the shipyard has supplied five ships of this type to the Soviet Union, and a sixth will be added this March. [Text] [Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 22 Feb 80 p 8]

ANADYR PORT--Anadyr construction workers have completed a deepwater mooring 2 years ahead of schedule, making it possible for two ocean-going vessels to unload at the mooring simultaneously. An Albatross gantry crane has been assembled at the mooring and was recently accepted for operation by a commission of the Anadyr mercantile seaport. [Vladivostok Maritime Service in Russian to the Pacific Far East 0710 GMT 11 Mar 80]

POLISH TRAWLER DELIVERY--Ship specialists at the V. I. Lenin Shipyard in Gdansk are building a series of big new refrigerated trawlers on an order from the Soviet Union. The first of the trawlers, which bears the name of Hero of the Soviet Union I. Zimakov, has already arrived in Murmansk and started operations. The trawler "Mikhail Kvashnikov," named in honor of the frontline soldier who accomplished a heroic feat in the battles in the Pechenga sector, has also been launched. Yet another ship bearing the name of a hero--Nikolay Zakorkin--will reinforce the fishing fleet in the near future. [Yu. Senichev] [Excerpt] [LD201423 Moscow KRASNAYA ZVEZDA in Russian 14 Mar 80 p 4]

DALTEKHFLLOT ADMINISTRATION--Seamen of the Daltekhflot Administration today opened the navigation season of the final year of the current 5-Year Plan period. This year they will have to complete 5 million rubles' worth of various work, including reconstruction of the ship repair yard in Petropavlovsk-Kamchatskiy, preparation of new depths in the Vostochnyy port, construction of a mooring for the timber export base and other work. Bottom dredging convoy No. 2 is the first to begin bottom dredging work in the Plastun Bay. [Vladivostok Domestic Service in Russian 0930 GMT 7 Apr 80]

SHIP FOR OIL SPILLS--A special ship has recently been launched in the Ukrainian shipyard in Zhdanov which will be used to combat oil spill pollution of the ocean. The Sea of Azov is its intended area of activity; this is to prevent contamination of its fish stocks. The ship is capable of removing 30,000 cc's of oil slick an hour. [Text] [Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 13 Mar 80 p 6]

VANINO-KHOLMSK FERRY CROSSING--Construction of the second stage of the Vanino-Kholmsk sea ferry crossing will begin this year and construction of moorings at the deep sea fishing base in Sovetskaya Gavan will be continued. [Khabarovsk Domestic Service in Russian 0930 GMT 9 Apr 80]

CSO: 1829

MISCELLANEOUS

VLADIVOSTOK TRANSPORT JUNCTION IN OPERATION OVER A YEAR

Moscow KHOZYAYSTVO I PRAVO in Russian No 11, 1979 pp 14-18

[Article by N. Tsakh, director of the coordinating council of the Vladivostok Transport Junction and chief of the commercial seaport: "Vladivostok: A Unified Transport Junction"]

[Text] More than a year has transpired since the time when the related enterprises of the Vladivostok Transport Junction, following the experience of the people of Leningrad, became the first in the Far East to make the transition to mutually coordinated continuous planning of their operations. As early as today it is possible to cite some results of our joint work.

There is no doubt that this has been a time when many organizational and technical questions were resolved, although not without labor, narrow departmental interests were overcome, the exchange of information was improved and the operations planning of work has also been improved. For the time being, we have taken the first step in raising the efficiency and quality of operations of the transport junction as a whole.

For sure, one must take note of the fact that as of the moment of the transition to mutually coordinated continuous planning, we already had experience in labor cooperation by seamen, portworkers, railway workers and motor vehicle transport workers on the basis of over-all socialist competition; the workers in these related industries had at their disposal some mutual information, unified dispatcher shifts worked in the ports and the yards adjacent to the ports and the fleet and ports of the Far Eastern Maritime Steamship Company had made the transition to the continuous planning of their operations. In other words, reorganization did not start from scratch.

The Vladivostok Transport Junction was organized by a joint order of the chiefs of the Far Eastern Maritime Steamship Company, the Far Eastern RR, the Far Eastern Motor Vehicle Transport Administration, the Vladivostok Branch of the railroad, the commercial port, and of the yards adjacent to the port at Vladivostok and Mys Churkin, and the director of the Vladivostok office of Soyuzvneshttrans [All-Union Association for Foreign Trade Transport of the USSR Ministry of Foreign Trade]. The base is the Vladivostok Commercial

Seaport. The city, an additional responsibility for the results of their joint work has been entrusted to the portworkers.

The organization of all the activity of the transport junction is carried out by a coordinating council and by working groups in conformity with the Statute on the Organization of Interaction of Enterprises in a Transport Junction. One of the most important forms of the council's work is weekly meetings where the managers of transport enterprises report on the fulfillment of the established quotas for the processing of the means of transport and the transfer of cargoes and on the results of the fulfillment of the normative moorage time and volumes of work performed. The council notes shortcomings, unfinished work and omissions, makes an evaluation of the activity of enterprises, individual sections and of the managerial staff and analyzes the operations situation; the approach and availability of the fleet, railroad cars and motor vehicles, and, in addition, sets the specific assignment for the next week for each enterprise. All the decisions of the coordinating council are authorized in the form of a protocol, while the joint working group informs all the executors of the decisions: these executors consist of freight zones, specialized transshipment complexes, brigades of port workers, consist-shunting and switching brigades at the yards, unified dispatcher shifts, and others. This group then readies and fills out all the documentation, supervises the implementation of decisions and conducts an operations analysis of the work of the junction, while it also carries out the drawing up of the continuous plan for the schedule for operations of the junction. And this is an extremely serious duty: the planning is carried out without interruption, with a depth of up to 20 days in terms of the fleet and of up to 10 days in terms of railroad cars and motor vehicles. The computer from the computer center of the Far Eastern Steamship Company is being used in conjunction with this.

The meetings of the coordinating council have a businesslike and principled character. I must note that its decisions are now being implemented in a more responsible manner: upon failure to fulfill the established quotas for the delivery and processing of the means of transport, each manager must not only explain the reasons to the council, but must also report on measures adopted or being adopted so that such breakdowns might not happen.

The fact of the matter now is that a council of secretaries of Party organizations and a council of the chairmen of people's control groups from transport enterprises have been created at the Vladivostok Transport Junction in order to heighten the responsibility of the managerial staff and Communists for the common work and to step up Party influence on economic activity. Supported by these organs, the coordinating council is finding forms to bring influence to bear on those managers or specialists who do not implement its decisions or who systematically disrupt the continuous schedule of operations of the junction. As an example of such influence, I might cite the mutual relations of the council with the local office of Soyuzvneshtans, on which the speeding up of the handling of ships and railroad cars and the advance movement of cargoes depend to a considerable extent. At first, the office kept to itself, accepting neither advice nor, what is more,

supervision. As of now the operations-effectiveness of the work of Soyuzvneshttrans has been substantially raised; job authorizations and assignments for import and export goods are, as a rule, issued to portworkers in good time.

To be sure, the success of the work of all links of the transport junction depends to a large extent upon the organization of socialist competition. Collectives from the enterprises and organizations of maritime and river, railway and motor vehicle truck freight transport are participating in it. The terms [of the competition] have been approved by the corresponding ministries and central committees of the trade unions.

Widespread dissemination has, for example, been given to such an effective form of socialist competition as the conclusion of one-term and standing agreements for the processing of large-tonnage ships, in the main ones carrying bulk cargoes (grain, sugar, timber, equipment, etc.), according to the direct variant of ship-railroad car or railroad car-ship. The one-term agreement is concluded for the period of one moorage of the ship in the port, while the standing agreement is concluded for the quarter, for half a year or for a year with ships operating according to a schedule or with successive runs to the port of Vladivostok.

The participants in the competition are the crews of the ships, employees of the transfer complexes in the freight zone, cost-accounting consolidated over-all brigades of dockers and machine operators at the port and switching and consist-shunting brigades of the yards. The collective of the local office of Soyuzvneshttrans is participating in the competition in terms of import cargoes. The fulfillment of mutual pledges in terms of the hourly schedule is supervised by the unified dispatcher shifts of the port and the yards at Vladivostok.

More than half of all the vessels are processed according to these agreements. A saving of normative moorage time is achieved during the processing of each ship, while the time for processing railroad cars is reduced by up to 20 percent as against the norm.

The constant quest for new forms has led to the organization of socialist competition among infrastructure subdivisions of enterprises. It is hardly necessary to explain how great the role of motor vehicle transport is in our over-all work. Let's say for instance that rail transport is fully relieved by a decision of the coordinating council of hauling large-tonnage containers throughout the network of yards in the Primorskiy Kray for the course of a year. The entire volume has been handed over to motor vehicle operators. This has enabled one to rule out irrational, short-haul shipments of freight by the railroad, each month to free up to 250 to 300 railroad cars from having to transport containers, thus utilizing them for other purposes, and, by virtue of this, to increase the volume of shipments of freight to 2.5 times what it had been with that same inventory of containers.

The creation of the Vladivostok Transport-Dispatch Office Enterprise, which ensures the shipment of containers according to plans which have been agreed

upon and coordinates the work of the transport junction with numerous freight shippers and freight consignees, has turned out to be effective. A joint dispatcher shift has now been created in the port, while specialized motor vehicle truck carriers for containers are processed by a permanent brigade of portworkers under whose command the necessary equipment has been placed. And, as a result, the average duration of the processing of trucks has been reduced by 40 percent.

Other measures are also promoting the clear-cut and well-coordinated operations of the Vladivostok Transport Junction. These are an increase in the shipment of freight in containers and packets (nearly one million tons were hauled in them last year), the processing of cargoes according to the direct variant of ship-railroad car (almost two million tons), the hauling of freight by unit trains (the level of running freight in unit trains is 82.3 percent) and many other things. It is also of no small importance that a new control system for the transshipment process has been introduced in the port, that transfer complexes with specialized cost-accounting and consolidated over-all brigades of dockworkers-machine operators attached to them have been set up and that a computer information center has been created, where they have set about the testing in experimental fashion of programs for the operations planning of the work of the port with the optimum production routine and for the continuous planning of the work of the transport junction.

The work of the Vladivostok Transport Junction is under the constant supervision of Party organs and the kray commission for the coordination of operations of various types of transport. Last year, a regional conference on the transport problems of the Far East was held at the initiative of the Primorskiy Kray Party Committee. Men in charge of Party, Soviet and economic organizations of Primorskiy and Khabarovskiy krays and of Sakhalinskaya, Kamchatkaya and Magdanskaya oblasts took part in its work. The recommendations worked up by the conference are being utilized by enterprises and the coordinating council in day-to-day activity.

The Vladivostok Transport Junction has begun to operate with a more regular tempo as a result of organizational and political work in the collectives of enterprises, the incorporation of a combination of joint measures and the transition to mutually coordinated continuous planning. Last year portworkers, railway workers and motor vehicle operators successfully fulfilled the production-and-finance plans and the socialist pledges which had been adopted and ensured the dispatch of freight to the regions of the Far North and of cargoes to the Socialist Republic of Vietnam; they increased the transshipment of imported goods for the country's new construction projects, including large-diameter pipes for the Urengoy-Chelyabinsk and Orenburg-Western Border gas pipelines and large-scale equipment for gas processing plants being built in the region of Nizhnevartovsk. A saving has been achieved in the moorage time and period of standing idle for all types of means of transport and the time that freight is stored at the port has been reduced, while the norm for railroad car turn-around time has been fulfilled. And this year all the enterprises of the junction are also successfully fulfilling the plans, socialist pledges and contractual terms as far as over-all competition is concerned.

But no matter how real and tangible the successes might be, there are many essential shortcomings, much unfinished work and many problems in the operations of the Vladivostok Transport Junction. Last year, for instance, the targets for the growth of intensiveness of freight operations were not met. There were 157 ships and 22,000 railroad cars that stood idle for a while during processing. We still have substantial financial losses from the failure of goods to remain intact during processing and damage to railroad cars is tolerated, while their repair on an industrial basis is being but slowly introduced. Personnel turnover is great, while this, of course, also takes its toll on labor discipline and on the occupational skill of workers and of middle-rung operations and warehousing personnel.

There are quite a few miscalculations both on the part of transport ministries, as well as locally in the planning of shipments. Let's assume that the balanced delivery and export of goods is disrupted; in such a case a pile-up of railroad cars or goods is at once created. All last year the Vladivostok Transport Junction had to work feverishly owing to a systematic downgrading of the plan for railroad cars to be engaged to carry large-diameter pipes, equipment, petroleum coke [neftekoks] and other imported goods and also owing to the frequent convention interdictions [konventsionnyye zaprety] being introduced by the Ministry of Railways. Moreover, 25,500 gondola cars and flatcars left from Vladivostok empty during the course of the year, while at the same time from 30,000 to 40,000 tons of imported goods would continually be awaiting shipment at the port.

The production plans of workers in related industries are not fully coordinated and the volumes for the transport both of coastal trade as well as export cargoes are not covered by the tonnage for regular haulage, while disruptions of schedules for the arrival of ships, which do occur, create additional unevenness in the load on the production capacities of the port, which, in turn, leads either to the layover of railroad cars and motor vehicles or to periods of time when ships must stand idle.

In this respect, the planning of timber shipments is, in my opinion, typical. The Far Eastern Maritime Steamship Company, the administration of the Far Eastern RR and the port receive a so-called "limiting" telegram for each quarter, signed by the Ministry of Railways, the Ministry of the Timber and Wood Processing Industry, the Ministry of Foreign Trade, the Ministry of the Maritime Fleet and the Soyuzglavles [Main Administration for the Supply and Marketing of Timber Products attached to the USSR State Committee for Material and Technical Supply], on the shipment of lumber for export by enterprises of the timber industry. The telegram sets the daily norm and volumes for the shipment of timber and also the norm for the unloading of railroad cars in ports that are transport junctions. However, this telegram is not sent to the branches of the railroad and to the yards adjacent to the port, supervision over the unloading and approach of railroad cars with timber is weak, railway workers locally do not fret over the established norm and, as a rule, the norm for the unloading of railroad cars with timber destined for export is, on the whole, fulfilled by no more than 65 to 70 percent. And here is what is still happening: the port will pay a fine to the railroad for

failure to fulfill the norm for the unloading of railroad cars containing freight for transshipment, while the railroad bears no responsibility whatsoever either to the port or to the steamship company for the non-delivery of railroad cars. Thus, during the first quarter of the current year alone, more than 1,500 railroad cars containing timber, or more than 70,000 tons of freight which was included in the plan for processing by the port and for shipment by the fleet of the Far Eastern Maritime Steamship Company, failed to reach us.

In addition to the ones previously enumerated, there are still many unresolved questions which impede the optimum operation of transport junctions. Unfortunately, they cannot be resolved locally by the managers of transport enterprises. These are the development of production capacities, an improvement in the conditions for the transporting of goods and the setting up of a procedure whereby one transport enterprise could compensate another for expenditures incurred for additional work. I think that these and other problems testify to the fact that it is necessary to create a corresponding interdepartmental coordinating organ which would resolve the problems of the further development of interaction, planning and agreement upon work, would consider suggestions made locally and would publish recommendations drafted on the basis of the experience of the country's numerous transport junctions.

I have already mentioned that in Vladivostok the employees of related industries are working and being guided therein by the Statute on the Organization of Interaction of Enterprises in a Transport Junction. However, one must call a spade a spade: the Statute was founded on the principle of mutual conscientiousness of partners in competition and work and does not have a norm for penalties. Managers do not bear any other responsibility other than moral.

There is no question that a standard Statute is needed that would be approved by the directors of departments (ministries) and which would clearly define the staff of the coordinating council, the interrelationships of workers in related industries and their responsibility for observance of continuous plans-and-schedules for the work of the transport junction.

Meanwhile, there was also discussion of this at the All-Union Seminar of Transport Workers, which was held a year ago in Leningrad. The participants in the seminar worked up interesting and useful recommendations then: it is only a pity that many of these recommendations have simply remained on paper. Up to the present time, not a single methods or model document has come out on the work of related transport enterprises, correctives have not been made in the procedure for planning volumetric and qualitative indicators and uniform indicators have not been provided for the evaluation of work. Scientific organizations of the transport departments are doing an inadequate job or are just plain slow in generalizing and summing up the available experience and in carrying out the drafting of standardized acts, etc.

Hope is to be found, it is true, in the fact that the majority of these shortcomings were discussed at the joint meeting of the boards of the Ministry of

the Maritime Fleet and the Ministry of Railways and of the presidiums of the central committees of trade unions of the workers of maritime, river and rail transport. It goes without saying that the putting into effect of the joint decree that was adopted will promote the further improvement of the work of transport junctions, including the Vladivostok junction.

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0663

CSO: 1029

MISCELLANEOUS

TUNNEL TO CONNECT LENINGRAD ISLANDS

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 11 Dec 79 p 4

[Article by M. Chuprova: "Tunnel under the Canal"]

[Text] A unique operation has been undertaken in Leningrad--the first section of a tunnel has been installed, a tunnel which will connect the Kanonerskiy and Gutuyevskiy Islands with the city.

"Again the islanders are absent?"--I remember the schoolteachers uttering in a crushing tone, while bending their glances at the empty desks. A great many years have passed, but I still remember my classmates not being able to come to school for several days. And even now matters are not too much better. Leningrad, as you know, is situated on a number of islands. Almost all of them are linked together by bridges. Almost, but not all. Two of them--Khanonerskiy and Gutuyevskiy--until now have not had a reliable connection with the mainland; they are separated from the latter by a maritime canal along which huge, ocean-going ships sail into the port of Leningrad. The only transportation is the ferry, and it is not always too reliable.

Scientists and engineers looked over quite a few variants which would allow them to guarantee a reliable connection between the islands and the city. A bridge? It would hinder the movement of ships along the maritime canal. What about digging a tunnel with a subway-type shield? It would be too narrow and not provide for the four-lane traffic of transportation. They finally decided on a tunnel, but in order to construct it under the canal, they determined upon a method which is new in principle--to assemble it out of five 75-meter reinforced concrete ducts, laid in a special channel at right angles to the maritime canal.

Not far from the future crossing they dug the excavation pit, protected from flooding by a narrow cofferdam; thus they obtained something like a drydock. Within it the bridge-builders began to assemble the tunnel sections, gigantic structural components, each one of which weighs about 10,000 tons. Then the sections were sheathed with metal on all sides--they were transformed into something like pontoons. And, finally, the day

arrived when the cofferdam was removed; the water flooded the excavation pit, and the sections floated to the surface.

Four heavy-duty tugboats slowly pulled the first section along the canal to the place where it was to be joined with the monolithic part of the tunnel. Again preparations were begun. Here, as in a space flight, the joining is one of the most complex and serious steps. With the aid of powerful winches the "pontoon" was swung around and installed in the channel which had been prepared for it. Such a complex operation was carried out in our country for the first time. This tunnel will go into operation next year.

2384

CSO: 1829

MISCELLANEOUS

TRANSSHIPMENT PROBLEMS AT OSTROVSKIY PORT

Moscow VODNIY TRANSPORT in Russian 8 Mar 80 p 2

[Article by S. Grigor'ev: "A Repetition of Errors: Cargoes Are Slowly Piling Up at the Osetrovskiy Port"]

[Text] During the brief northern sailing season the Osetrovskiy Port must offload 1,850,000 tons of general cargoes to the ports of the Lena, Yana, and Kolyma. It is no joking matter, if one takes into consideration the brevity of the shipping season and the complex navigational circumstances on these rivers. In order to proceed with this, and in order during the summer not to be forced to process a mass of railroad cars in the reserve yard and at the same time unload tens of thousands of tons, it is necessary to accumulate at the port no less than 650,000 tons of cargoes.

There are three months left until the opening of the shipping season. As of now the Osetrovskiy Port has 230,000 tons of cargoes. Yet another 420,000 tons remain to be received. This means that railroad cars will have to be processed at the rate of a hundred per day.

The river workers are capable of carrying out this task. They have everything necessary to do this. But the job is being held up by the railroad workers. As far back as January the railroad established a plan for delivering freight to the port. It has not been fulfilled. Instead of 90,700 tons of freight, only 38,000 tons arrived at Osetrovo. The situation did not improve in February either. If matters go on like this, then in the near future, according to the specialists' opinion, the port workers will have to unload from 160 to 170 railroad cars every day, and during the summer even more: from 300 to 350 cars per day.

The situation which has taken shape is very similar to that of last year. Last summer at the Bratsk Division of the Eastern Siberian Railroad hundreds of cars loaded with freight important for the national economy accumulated near the port. The Osetrov people were not able to process them. There were not enough workers or places for unloading. The result was that customers along the shipping routes did not receive 418,000 tons of cargoes.

And the explanation for the disruptions is the same. A lag in the transshipment of cargoes began in January. Growing like a snowball, it led during the summer to an accumulation of railroad cars, meetings, rush work, and huge expenditures of funds on the railroad and at the port.

In the opinion of V. Minev, chief of the Osetrovskiy port, the problem of the port's smooth operation also persists in the quality of hauling cargoes over the length of the entire shipping system. It begins in May. At this time the fleet sails forth, and the ships must be loaded. This means that during the winter the influx of railroad cars should be at its highest point so that the warehouses and loading areas can be filled up ahead of time. But in May, when the transshipment of goods is occurring onto ships in order to dispatch them to the ancillary and small rivers, it is feasible to reduce somewhat the influx of railroad cars.

Such a scheme was outlined by life itself and by many years of experience. But the planning organs have not taken this into consideration, and, as a result, a surplus of rolling stock is created in May which the port is unsuccessful in handling.

During the winter of 1979 the Osetrovskiy port was 228,000 tons of cargo short. These tons began to appear right at the high point of the shipping season, disrupting the operational efficiency of the entire transportation center, and this was reflected in the shipment of cargoes to the Far North. We must not repeat past errors. It is still not too late to avoid miscalculations in planning and to begin smooth operations with regard to the winter shipping of freight to Osetrovo.

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CSO: 1829

MISCELLANEOUS

AIR CUSHION LAND VEHICLE DESCRIBED

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 31 Jan 80 p 4

[Article: "A Flying Motorcycle"]

[Text] Despite its almost half a century of history, the air-cushion apparatus up to the present has had a limited sphere of utilization. West German specialists have attempted to expand it by creating a "gliding motorcycle." To be sure, the only thing which it has in common with the usual two-wheeled vehicle is, perhaps, the crackling roar of its motor. For this one-seated apparatus the engineers have worked out an extremely simplified scheme of ducts for creating a vertical air cushion. And in its construction they used such lightweight materials as aluminum and plexiglass. The apparatus's motor rotates the blades of a propeller, and the air cushion raises the vehicle to a height of as much as 0.4 meters. Capable of developing speeds of up to 80 kilometers per hour, it has been designed for foresters, rural mailmen, and physicians.



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